



ROBOTISATION & PLC PROGRAMMING

The robotisation and PLC programming competence at the Institute of Machine Tools and Mechatronics is primarily intended to provide the installation, programming and preparation of case studies for industrial robots and the programming of PLCs. In line with current requirements, industrial robots and PLCs are also integrated into several manufacturing processes, thus increasing productivity, and such systems are suitable for compensating for today's shortage of human labour.

COMPETENCIES

- Assessing processes carried out so far with human labour
- Planning the installation of industrial robots, programming, and performing simulations
- CAD-based modelling of workspace elements
- Designing individual, workpiece and task-specific robotic end-effectors
- Carrying out case studies of processes performed by robots
- PLC programming, simulation/visualisation



SERVICES

- Development of case studies on robot-solved tasks
- Robot programming courses at basic and advanced levels
- Simulation of tasks to be performed by robots
- PLC programming course



TOOLS

- Fanuc LR Mate 200iC industrial robot
- KUKA KR15/2 industrial robot and 3 KUKA KR210-2 industrial robots
- Festo MPS system, pneumatic positioning carriage, RVJ-2 Mitsubishi industrial robot
- Bosch Rexroth PLC training laboratory



REFERENCES

- Case studies for robotic assembly processes (Robert Bosch Power Tool Kft.)
- Installation of a Kawasaki robotic cell suitable for powder coating of pipeline fittings (Feron Kft.)
- Holding a PLC programming course
- Holding two robot programming courses
- Modernisation of PLC control of an ultrasonic washing machine (Bosch Rexroth Pneumatika Gyártó és Kereskedelmi Kft.)
- Creating a postprocessor for the Kuka KR15-2 industrial robot